2 Alternatives Including the Proposed Action

On January 8, 1999, the County of Imperial Board of Supervisors accepted as complete the Newmont Gold Company (Newmont) application to amend the Conditional Use Permit for the Mesquite Mine to allow additional mine expansion. Expansion facilities were detailed initially in the November 1998 POO. During 1999, environmental studies of the expansion were undertaken, and Newmont personnel participated in numerous discussions with the lead and responsible agencies regarding project environmental and permitting issues. As a result, an alternative expansion plan, called the "Reduced Footprint Alternative" was developed in order to minimize surface disturbance by expanded mine activities, and thus to minimize several environmental impacts, associated with biological resources, cultural resources, etc. Concurrently, permitted gold exploration activities in the two half-sections of State land located north of the existing Big Chief Pit more clearly delineated ore locations and quantities in that area. The results of this work are a modified Proposed Action, which essentially incorporates mining increased ore quantities into the November 1998 POO, and the Reduced Footprint Alternative which is detailed in the November 1999 POO and incorporates mining increased ore quantities and decreased facility footprints.

2.1 PROPOSED ACTION

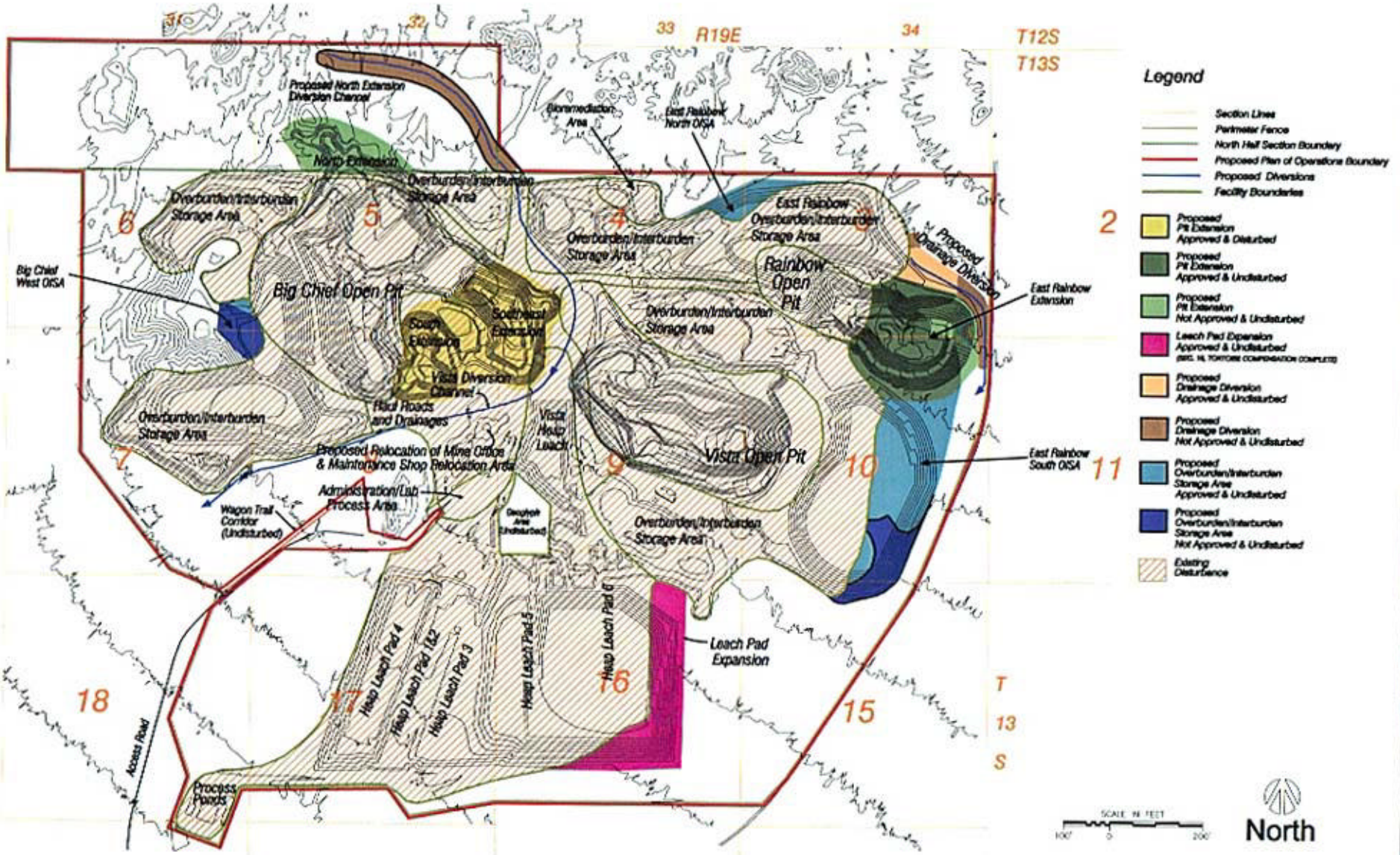
2.1.1 Proposed Action Site

The existing 5,200-acre Mesquite Mine is located in eastern Imperial County south of the Chocolate Mountains Aerial Gunnery Range and north of Highway 78 (Township 13 South, Range 19 East, San Bernardino Meridian). The Proposed Action includes disturbance of an additional 522.2 acres. However, 332.7 of the 522.2 acres have been previously permitted for disturbance as summarized in the Consolidated POO. As shown in Figure 1.3-2, the Proposed Action is located partially within the existing Consolidated Plan of Operations permitted project boundary (Consolidated POO, Santa Fe, 1995), and would allow for the continued extraction and processing of economical gold deposits, delineated by drilling programs initiated during 1988 and continuing to date. The areas of existing disturbance are shown in Figure 2.1-1. Projected acres of disturbance by proposed expansion area is shown in Table 2.1-1. The project proposes expansion of two existing pits: the Big Chief and Rainbow open pits (See Section 2.1.5.1). The proposed pit extensions would encompass 177 acres of undisturbed public lands (North Big Chief and East Rainbow) of which, 101 acres would be permitted, and 76 acres would be unpermitted. In addition, the Big Chief Pit would be extended 171 acres into areas previously disturbed by other mining activities to the south and to the southeast. These latter extensions do not require any additional permits beyond those already issued. Figure 2.1-1 shows the proposed new disturbance, and previously approved areas.

Table 2.1-1
Comparison of Areas For Each Proposed Facility, By Major Alternative

Proposed Facilities	Proposed Action			Reduced Footprint Alternative		
	Proposed Area (AC.)	Permitted Disturbance (AC.) (a)	New, Unpermitted Disturbance (Acres)	Proposed Area (AC.)	Permitted Disturbance (Acres) (a)	New, Unpermitted Disturbance (Acres)
Mine Pits						
Big Chief						
North Extension	51.2	0	51.2 (d)	51.2 (d)	0	51.2 (d)
South/Southeast Ext.	171. (b)	NA	NA	171. (b)	NA	NA
Big Chief Subtotal	*222.3*	*0*	*51.2*	*222.3*	*0*	*51.2*
East Rainbow Extension	126.0	100.9	25.1	126.0	100.9	25.1
OISAs						
Big Chief West	21.2	2.6	18.6	-	-	-
East Rainbow North	22.0	22.0	0	5.7	5.7	0
East Rainbow South	132.1	98.8	33.3	103.4	98.8	4.6
Subtotal OISAs	*175.3*	*123.4*	*51.9*	*109.1*	*104.5*	*4.6*
Heap Leach Pad 6	91.6 (c)	91.6(c)	0	91.6(c)	91.6(c)	0
Drainage Diversions						
North Extension	45.3	0	45.3	45.3	0	45.3
East Rainbow	32.8	16.8	16.0	32.8	16.8	16.0
Subtotal Drainage Diversions	*78.1*	*16.8*	*61.3*	*78.1*	*16.8*	*61.3*
TOTALS	**693.3**	**332.7(e)**	**189.5 (e)**	**627.1**	**313.8 (f)**	**142.2 (f)**
TOTALS (requiring biological compensation)	421.6			355.4		

Notes
(a) permitted by BLM, prior to listing of the desert tortoise
(b) biological compensation not required; the area was disturbed prior to the listing of desert tortoise as endangered.
(c) additional biological compensation not required; the area was already compensated for in 1992.
(d) Approximately 12 acres was disturbed during permitted exploration drilling in area north of the existing Big Chief Pit; of that, 9 acres are within the proposed pit extension. 45 acres of compensation are pending; however, no permits have been issued regarding pit excavation.
(e) numbers would total 693.3 if the 171.1 acres of Big Chief South and Southeast had not been purposely excluded.
(f) numbers would total 627.1 if the 171.1 acres of Big Chief South and Southeast had not been purposely excluded.



SOURCE: Newmont Mining Corporation, 2000

7/7/00

Mesquite Mine Expansion EIR/EIS

Proposed Action

FIGURE 2.1-1

The expansion project includes pit extensions of approximately 51 acres north into Section 5 and 126 acres (101 permitted, 25 unpermitted) on the southeast corner of Section 3 and the northeast corner of Section 10. Additional activities include proposed drainage diversions north of Section 5, and on the eastern extremes of Sections 3 and 10, adjacent to the pit extensions. The heap leach pad in Section 16 is already permitted to be expanded, and approximately 91.6 acres of pad area would be added to existing pads in the eastern part of Section 16. The project also includes construction of ancillary facilities such as access roads, and the relocation of existing ancillary facilities such as the mine office and shops displaced by the proposed Big Chief Pit expansion.

Most storage of subeconomic overburden/interburden (O/I) would be expanded and located at new out-of-pit overburden/ interburden storage areas (OISAs) (See Section 2.1.5.2). The "footprint" of the OISAs would be expanded by approximately 175 acres to accommodate storage of additional waste rock. In-pit overburden/interburden storage would also occur to the extent feasible given current gold prices and the need to protect mineralization (ore) that is presently uneconomical to recover.

2.1.2 The Mining Process

The Mesquite Mine is presently permitted as an open-pit, cyanide heap-leach mine with storage of overburdern/interburden above ground.

2.1.2.1 Open Pit Mining Techniques

The Proposed Action involves the expansion of various components of the currently operating Mesquite Mine. The undertaking does not propose to alter the conventional "open pit" mining and heap leach processing techniques or out-of-pit combined with in-pit overburden/interburden storage practices now in use. This process involves the excavation and processing of ore-bearing rock to extract precious metals. "Ore" is an economic term used to describe a mineral resource that can be profitably mined and processed. The size and configuration of the proposed pits is defined by the precious metals content, depth of mineralization, metallurgy and other geologic, geotechnical and economic factors.

Within the mine site and two north half sections, exploratory drilling was conducted to identify economically recoverable mineral deposits. Drilling results from the OISA and heap areas indicated that no ore reserves were identified in those areas.

Mining of the ore zones would employ conventional open pit mining techniques. Mined O/I would be placed on the OISAs, located adjacent to the pits. As mining progresses, the Big Chief, East Rainbow, and Vista Pits would also be partially backfilled. Figure 2.1-2 shows the projected final configuration and final contours in relation to the topography in the vicinity of the mine. Figure 2.1-2 depicts features to be reclaimed under the "Reduced Footprint Alternative" discussed in more detail in Section 2.2.2. This plan has been shown because it minimizes additional surface disturbance, and reduces project impacts. Thus, it is anticipated to be the preferred action by the Lead Agencies. If the Proposed Action is chosen, the reclamation plan would be identical in concept, but would

comprise an additional 66 acres of mining disturbance at the proposed Big Chief West OISA, East Rainbow North OISA and East Rainbow South OISA.

The overburden thickness above the ore zones is approximately 400 feet thick, and consists mostly of alluvial gravels (both unconsolidated and cemented) and minor amounts of volcanic rock. Ore and some O/I are comprised of weakly-altered gneiss. All of this material is expected to require drilling and blasting prior to excavation.

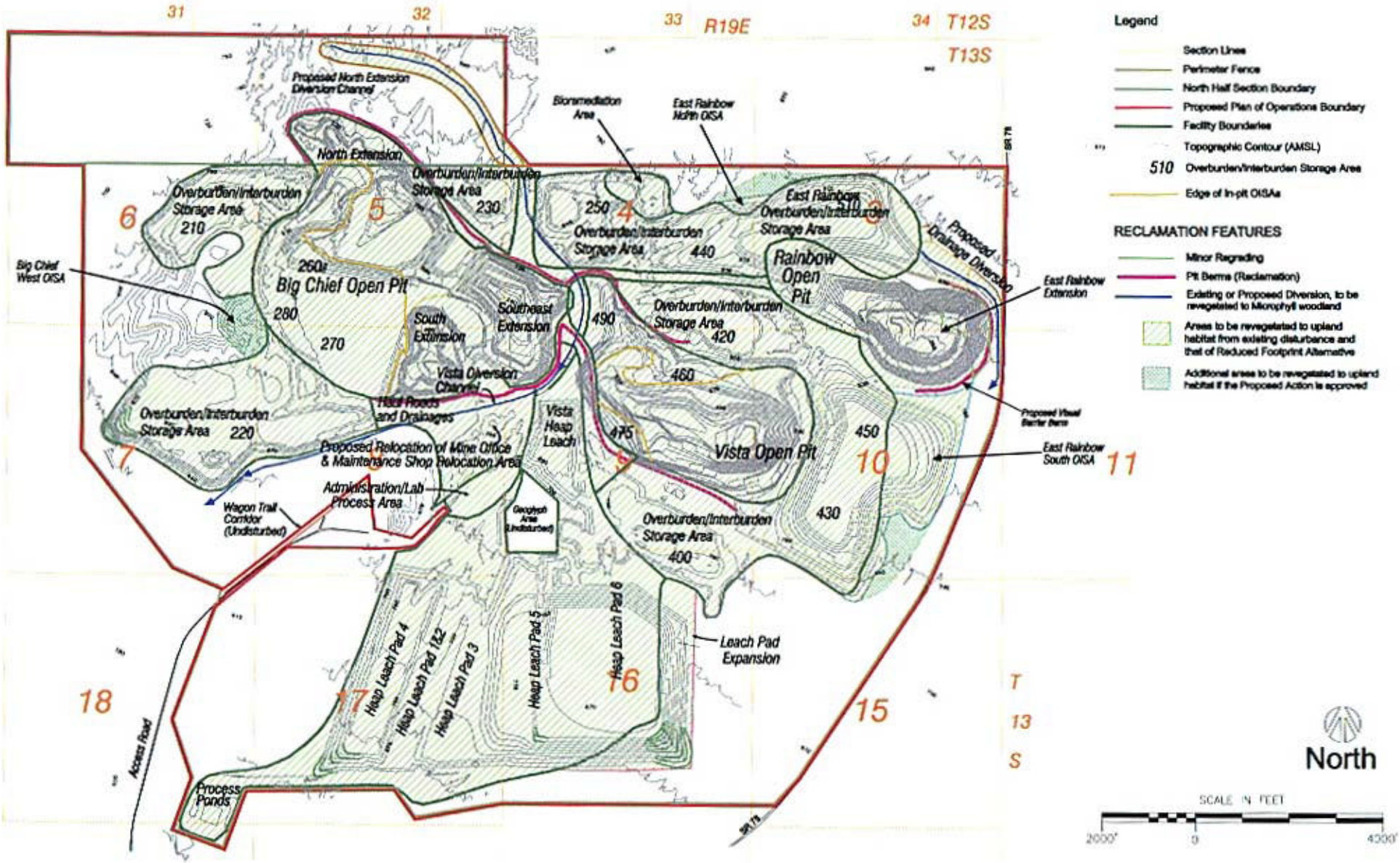
For blasting, mobile rotary blast hole drills would drill 6-3/4-inch to 12-inch diameter blast holes spaced on between 16- and 35-foot centers. The rock would be blasted with a conventional ammonium nitrate/fuel oil (ANFO) blasting agent, although an emulsion blasting agent may be used in the event that water is found in the drill holes. Blasting would occur only during daylight hours. The blasted rock would be loaded, using an electric shovel or diesel front-end loader(s)/shovel(s) into 150-300+-ton capacity haul trucks. No crushing of the ore is proposed, and run-of-mine (ROM) ore would be hauled by the haul trucks directly to the heap leach pad. O/I would also be hauled directly to an OISA. Haulage ramps in the pits have been designed with a minimum width of 120 feet and a maximum gradient of 10 percent. Minor sections of temporary ramping may be steeper and narrower. Haulage roads outside of the pit areas would be 120 feet wide, and in some areas would be 150 feet wide to allow for surface drainage areas and separate lanes for support vehicle traffic.

Haul roads adjacent to the pits may need to be relocated as the mining of the pits proceeds to ensure proper gradients and adequate separation for safety. Also, drilling permits may be sought, and geological surveys may be done in the areas located between the pits.

The ultimate pit walls would have overall slope angles varying from 35 to 45 degrees (1 horizontal to 0.7 vertical [1H:0.7V] to 1H:1V), depending on location of the slope in the pits. Pit wall slopes may be changed slightly as mining conditions, geotechnical and safety factors warrant. Changes would not disturb any lands not analyzed for disturbance in this EIR/EIS or previous environmental documents for the mine.

Piezometer and exploration drill holes drilled to the bottom of the proposed Rainbow Pit Extension have encountered ground water at depths of 528 feet above mean sea level (AMSL), which is above the anticipated floor of the pit. The Big Chief Pit has estimated water levels of 550 feet AMSL. As such, it is possible that groundwater would enter both pits during mining operations. The hydraulic conductivity of the bedrock formation in the mine area is very low, and total ground water inflow has been estimated at only 81.2 gallons per minute. Ground water encountered in the pits during mining operations would be utilized in dust control operations, or collected and used in process operations.

When mining operations have ceased and dewatering of the pits is no longer practiced, ground water inflow would continue, allowing water levels to rise and permanent lakes to develop in the pits. The water levels in each pit lake would rise until, at a certain elevation (called the “near steady-state equilibrium elevation”), evaporative losses from the lake surface would exactly equal ground water inflow. Although pit lake elevations and volumes would not change significantly after near steady-



SOURCE: Newmont Mining Corporation and BRG Consulting, Inc. 2000

7/7/00

Mesquite Mine Expansion EIR/EIS

Proposed Final Reclamation Configuration

FIGURE 2.1-2

state equilibrium is attained, the concentration of chemical constituents dissolved in the lake waters would increase over time due to the process of evapoconcentration.

2.1.2.2 Geochemical Characteristics of Mined Materials

Some types of O/I, leached ore, or fresh ore can acidify contacting water when exposed to the atmosphere and ground or rainwater. This ability is characterized as a rock's "acid generating potential" (AGP). Generally, rock with a high AGP contains disseminated sulfide minerals, which can react with water and atmospheric oxygen to produce sulfuric acid. The generated acid may then leach metals and other constituents from the waste materials. Other O/I, leached ore, or fresh ore may be acid neutralizing under the same conditions. ANP is a rock's "acid neutralization potential". O/I materials with low acid potential and high neutralizing potential are generally environmentally benign. Additionally, proximity of rocks of high ANP can effectively buffer, or neutralize, acid generated from high AGP materials.

Geochemical characterization analyses were conducted on O/I and leached ore samples from above and below the oxidized zone at the original pits to identify rock types that are potentially capable of generating acidic conditions upon oxidation. The sampling and analyses procedures used to characterize the waste generated from the mine processing, as described in the following sections, were based on procedures generally accepted by the California Regional Water Quality Control Board (CRWQCB), Colorado River Basin Region for characterizing mine waste material.

Static Test Analyses

As part of the ANP analysis, the total sulfur content of each sample was determined to evaluate its AGP. The ANP of each sample was also determined by titrometric methods. The ratio of AGP:ANP is the sample's net neutralization potential (NNP). Based on these analyses performed by the Mesquite Mine metallurgical laboratory between 1992 and 1995, the potential for the Project O/I and spent ore material to be acid generating was found to be low to very low.

During the last two years, additional ANP analyses were performed on representative rock types collected from the Rainbow Pit and from the two north half sections (Sections 5 and 6). The rock types encountered in the Rainbow and two north half sections are typically net neutralizing with positive NNP values. However, it should be noted that only the Jurassic Mafic Gneiss (MG) rock type encountered in the Rainbow Pit is clearly net neutralizing according to the definition of NNP> 20 tons carbonate ($CaCO_3$) per kiloton rock, whereas the other gneissic materials from both locations fall within the NNP range of 0-20 tons $CaCO_3$ per kiloton of rock, and therefore, exhibit greater uncertainty in their neutralizing capacity (Baker Consultants, Inc., 1999).

Geochemical Characteristics

Metal analyses, using total metal and acidic rain water extraction methodologies (the latter using the U.S. Environmental Protection Agency (USEPA) Synthetic Precipitation Leaching Procedure (SPLP) (Method 1312)), were conducted on samples of O/I and ore material. The SPLP is designed to simulate the concentrations of metals and other compounds which could be leached from waste

materials exposed to naturally acidic rainfall. Ore samples were first subjected to leaching by dilute cyanide solution to remove precious metals, then neutralized to be representative of the leached ore material, which would remain on the heaps following completion of Project activities. The results were compared to U.S. EPA drinking water maximum concentration levels (MCLs) (Shepherd Miller, 1998).

The pH values of the SPLP extracts ranged from near-neutral (6.76) to moderately alkaline (9.11). Total dissolved solids (TDS) concentrations ranged from 41 to 271 mg/L, sulfate concentrations ranged from <1 to 90 mg/L, and chloride concentrations ranged from <1 to 43 mg/L. Most constituent concentrations were below MCLs. However, pH values of nine of the 19 samples were above the secondary MCL of 8.5, and eight samples had aluminum concentrations above the upper range of the secondary MCL of 0.2 mg/L (all rock types had one or more sample with elevated pH values and aluminum concentrations). Three samples had arsenic concentrations above the primary MCL of 0.05 mg/L.

2.1.2.3 Ore Processing Facilities

Ore at the Mesquite Mine is processed using conventional heap leach methods. Other mines in Imperial County and throughout the western United States have successfully utilized heap leach methods for several decades. The process involves stacking the ore on an engineered, synthetically-lined, impervious pad. The surface of the ore heap is then wetted with an alkaline solution containing low concentrations of sodium cyanide. This solution percolates through the ore, producing a soluble, precious metal-cyanide complex known as the "pregnant" solution. The pregnant solution drains downward through the heap to the pad liner, then flows along the liner within a pipe drainage system to the process solution ponds. The gold/silver-bearing pregnant solution is then pumped from the process solution pond to the processing facility where the precious metals are extracted from the solution via a carbon adsorption process. The resultant "barren" solution, from which the gold/silver has been removed, then is reapplied to the heap leach. Additional makeup of water and sodium cyanide is added as necessary.

In the refining process, the carbon from the adsorption process is first stripped of its gold/silver by a stripping solution from which the gold/silver is then electroplated onto steel wool or stainless steel cathodes. The electroplated gold is then remelted and cast into bars for transport.

2.1.2.4 Vadose Zone and Ground Water Monitoring

Compliance monitoring is performed pursuant to California Regional Water Quality Control Board (RWQCB) Monitoring and Reporting Program (Revision No. 1) No. 95-016 (MRP). Twenty-two vadose monitoring wells drilled 20 to 100 feet below grade are installed peripheral to the leach pads and the solution pads. A vadose (the unsaturated zone above the water table) zone monitoring system is used to sample gas for hydrogen cyanide (HCN) adjacent to and underneath the leach pad and process sites. Every quarter, an additional nine vadose wells are used to sample for cyanide solution. Seven ground water monitoring wells (depth approximately 300-350 feet) are used to monitor ground water quality at the site. The wells are equipped with electric submersible pumps for

purging and quarterly ground water sampling for the primary monitoring parameters: total cyanide, free cyanide, total dissolved solids, gold, silver, copper, iron, arsenic, sulfate and nitrate. The field parameters including temperature, specific conductance, pH, turbidity and water depth are also measured quarterly at each well. To date, all samples have been in compliance with the RWQCB permit.

2.1.3 Support Facilities

The Mesquite Mine expansion would rely on the existing mine's support facilities that include: office buildings; maintenance shop on a reinforced concrete slab; telephone facilities, including a microwave communications antenna; explosives magazines; an ammonium nitrate storage facility; a lime storage facility; chemical storage areas; diesel fuel storage areas; water storage facilities; an electrical substation and electrical distribution power lines; emergency electrical power generators; a temporary hazardous waste storage area; equipment wash facilities; a laboratory; roads; and surface flow and erosion control structures. Off-site support facilities include: existing water supply wells and connecting pipeline, and electrical power lines.

2.1.4 Proposed Facilities

The following information is summarized from the Plan of Operations for the Proposed Mesquite Mine Expansion (Newmont Gold Company, 1998 and 1999). The earlier document addressed a Plan from which the Proposed Action was derived, while the later document addressed a Plan that has been call the Reduced Footprint Alternative in this EIR/EIS.

The proposed Mesquite Mine Expansion consists of the following currently permitted and unpermitted expansions:

- Extensions of the Big Chief Open Pit Mine
- Extension of the Rainbow Open Pit Mine
- Expansion of Out-of-Pit Overburden/Interburden Storage Areas (OISAs)
- Construction of ancillary facilities such as access roads and storm water diversion channels
- Expansion of Heap Leach Pad 6

Disposition of subeconomic O/I in a combination of OISAs and in-pit storage is proposed. The mine expansion would also use the currently permitted Section 16 heap leach pad expansion described in Section 2.2.3.1. The Proposed Action includes an application to RWQCB for expansion of the Section 16 heap leach pad from 200 feet to 300 feet in height.

2.1.4.1 Open Pits

The identified ore reserves occur approximately 250-430 feet beneath the existing ground surface. The existing Mesquite Mine is permitted for open pit mining to access ore reserves. Open pits are created by drilling, placement of explosive charges, blasting, loading blasted material into large 150-300+-ton haul trucks, and hauling O/I to the OISAs, or hauling ore to the heap leach facility.

Rainbow Open Pit Mine Extension

The existing Rainbow Open Pit Mine would be extended to the southeast. The extension would allow access to approximately 23 million tons of ore and would occupy approximately 126 acres. This extension would only require 25 acres of unpermitted disturbance because 101 acres of the 126-acre footprint was previously permitted for disturbance (See Figure 2.1-2). Approximately 71 million tons of O/I from the extension would be produced. This material would be stored in an OISA.

The maximum depth of the proposed pit extension is approximately 570 feet. The east wall of the expanded pit would have a designed inter-ramp slope angle of 43 degrees and would be set back from Highway 78, as recommended by a professional engineer, in order to provide adequate geotechnical stability. An O/I buttress constructed at the toe of the eastern pit wall would be considered as an option if needed to provide additional pit wall stability adjacent to the highway corridor.

Additionally, a berm would be constructed on the eastern edge of the proposed extension to help direct stormwater and to reduce visual impacts to Highway 78 traffic. The berm would be a minimum of 10 feet in height with 2:1 side slopes and would extend approximately 2,450 feet.

Big Chief Open Pit Mine – North Extension

The extension of the existing Big Chief Open Pit Mine toward the north would extend into the northern half of Section 5 of T13S, R19E. The proposed extension would allow access to approximately 8 million tons of ore and would occupy approximately 51 acres of new, unpermitted disturbance.

Approximately 20 million tons of O/I would be removed from the proposed extension. This material would be stored in an OISA.

Big Chief Open Pit Mine – South and Southeast Extension

An extension of the existing pit is proposed toward the south and southeast in Sections 4, 5, 8 and 9 of T13S, R19E. The proposed pit extension would allow access to approximately 25 million tons of ore and would occupy approximately 171 acres. These 171 acres are currently disturbed by the presence of support/ancillary facilities such as haul roads, shops and a portion of the Vista Heap Leach Pad. Approximately 24 million tons of O/I would be removed from the proposed extension. This material would be stored in an OISA.

2.1.4.2 Vista Heap Leach Pad – Rinsing, Closure and Partial Removal

Approximately 6,000,000 tons of spent leach ore is currently under the final phase of leaching on Vista Pad. Following completion of rinsing, formal closure and State of California approvals, the rinsed ore would either be removed and stored in an IOISA in the existing Vista Open Pit Mine, or would be relocated to a lined heap leach facility (Pad 6) if rinsing is not successfully completed. The

truncated northern limit of the Vista Heap Leach facility would then be rebuilt to provide a containment berm and solution channel similar to the existing facility.

Applicable RWQCB detoxification standards for cyanide and for metals (mining waste Class "C") that Mesquite Mine must meet are contained in RWQCB Order No. 95-016. It is anticipated that no more than 1 pore volume of water, obtained from the existing well field, would be required to rinse the heap leach materials to meet RWQCB standards. The nearby Picacho Mine, which has similar ore properties, met the same standards using only 0.5 pore volume of rinse water.

While no pads are likely to be ready for rinsing prior to start of the expansion, it is expected that rinsing of the Vista Pad will be completed in the near future. This area could serve as a demonstration for the amount of water needed for rinsing to meet applicable detoxification standards. It must be noted here that release of any bond is dependent on RWQCB review and approval of the results of the detoxification process. If, through unusual conditions, more rinse water is required than has been anticipated, Newmont Mining Corporation would cooperate in revisiting the bond calculations to re-establish an appropriate bond.

2.1.4.3 Overburden/Interburden Storage Areas

The proposed mine plan would generate approximately 242 million tons of O/I. Final disposition of these materials from the various proposed pit extensions would be via expanded OISAs and/or discretionary backfilling into existing pits. These OISAs include the proposed Big Chief West OISA, East Rainbow North OISA and East Rainbow South OISA (Figure 2.1-1). Table 2.1-2 depicts the presently unpermitted land disturbance necessary for the proposed OISAs.

The previously approved East Rainbow North OISA would have a capacity of approximately 82 million tons and would be expanded by 22 acres, which have been previously approved for surface disturbance. The proposed East Rainbow South OISA would have a capacity of approximately 120 million tons and would occupy approximately 132 acres. Approximately 99 of the 132 acres have been previously approved for surface disturbance. Approximately 33 acres of new (not previously approved) disturbance would occur. The proposed Big Chief West OISA would occupy approximately 21.2 acres, of which 2.6 acres already have permits for disturbance, and 18.6 acres would require new permits.

The Proposed Action would include some in-pit storage of O/I, estimated at approximately 12.5 million tons. Newmont proposes to consider additional in-pit storage in the future as economic conditions allow.

2.1.4.4 Storm Water Diversion Channels

All surface drainages in the area are ephemeral, with flows occurring only during, and immediately following, major precipitation events. It is necessary to convey storm water around project facilities to allow for continuing operations and to ensure long-term stability of the resulting pit walls, OISAs and heaps. The proposed drainage diversions would permanently route three washes (identified as

Table 2.1-2

Proposed OISA Expansions

Proposed OISA	O/I Capacity (Tons)*	Height (Fee)**	Unpermitted Private Land Disturbance (Acres)	Acres of New Unpermitted Federal Land Disturbance
East Rainbow South	119,731,000	300	0	33
East Rainbow North	81,720,000	300	0	0
Big Chief West	42,921,000	300	0	19
TOTAL	**244,372,000**		**0**	**52**

Notes: * Tonnages are rounded up to the nearest thousand. The storage of O/I would also include some backfilling of existing pits.
** OISA heights of 300 feet were previously approved under existing permit conditions.

Source: Newmont Gold Company, 1999

the East Rainbow Pit Diversion Channel, Big Chief Open Pit North Extension Diversion Channel, and the Vista Diversion Channel) around the mine pits. In each case, all drainage diversions would channel surface flows either back into the same drainage channel, or into another existing nearby drainage channel, which eventually flows back into the original drainage channel (See Figure 2.1-2).

Based on the existing U.S. G.S. topographic map of the area, and the locations of proposed diversions, channel slopes of the existing washes were compared to the proposed diversion channel slopes. The four major washes upstream from the North Diversion have slopes ranging from 1.8 to 2.4 percent. The slope of the proposed North Diversion is 0.5 percent (per Hanson, April 1998). Below the diversion channel, the natural washes have slopes of 1.2 to 1.4 percent. The East Rainbow Diversion has a proposed slope of 0.8 percent. The two major washes upstream from it have slopes of 2.1 and 2.2 percent. Below the diversion, the natural washes decrease in slope to 1.8 and 1.9 percent.

The diversion channel berm would be armored with rip-rap at the transition where the natural washes intersect with it, to minimize erosion. The decreased slope in the diversion channel would serve to slow down the rate of water flow. Flow rates would increase when the diversion delivers the water to the natural channel downstream. Peak flows for the North Diversion and the East Rainbow Diversion under a 100-year – 6-hour storm event are projected to reach 2,330 and 300 cfs, respectively (Hanson, April, 1998).

East Rainbow Pit Diversion Channel

Approximately 33 acres would be required for the construction and ancillary disturbance associated with the proposed storm water diversion around the northern and eastern perimeter of the proposed East Rainbow Pit Mine extension. Approximately 17 of the 33 acres have been previously approved for surface disturbance. This diversion would also require approximately 16 acres of new (not previously approved) disturbance.

An earthen berm would be constructed on the southern/western sides of the diversion channel to direct flow. The berm would be armored pursuant to the Engineer's design. Channel grade would be approximately 0.5 to 1.0 percent over the entire channel length. Storm water flows leaving the channel would return to existing washes to the southeast of the project site and would not affect either project components or Highway 78.

Big Chief Open Pit – North Extension Diversion Channel

Approximately 51 acres of new (not previously approved) disturbance in Section 5 of T13S, R19E would be required to construct a surface-water diversion channel along the northern perimeter of the proposed Big Chief Open Pit Mine extension. The proposed channel, referred to as the North Extension Diversion Channel, would divert storm water flows around the northern boundary of the pit. An earthen berm would be constructed on the south/west sides of the diversion channel to direct flow. The berm would be armored pursuant to the Engineer's design. Channel grade would be approximately 0.5 to 1.0 percent over the entire channel length. Storm water entering the channel

would then be conveyed southward through the site by the proposed Vista Diversion Channel (discussed below), and then to portions of the existing engineered drainage. Ultimately, flows would leave the site via the existing drains in Sections 7 and 8 in T13S, R19E, return to existing washes, and drain away from the site.

Vista Diversion Channel

Mining of the South and Southeast Extensions of the Big Chief Open Pit Mine would occur within the previously realigned drainage in the northeast corner of Section 8, T13S, R19E. A new channel, the Vista Diversion, is proposed to carry storm water flows emanating from north of the north extension of the Big Chief Open Pit Mine. This channel would be approximately located in its historic, pre-Mesquite Mine, location. The channel would be excavated in existing disturbed areas in native alluvium and would be armored pursuant to the Engineer's design. Channel grade would be approximately 0.5 to 1.0 percent over the entire channel length. Ultimately, flows would leave the site via the existing drains in Sections 7 and 8 in T13S, R19E, return to existing washes, and drain away from the site.

2.1.4.5 Heap Leach Pad 6 Expansion

This facility would be expanded to the east, under existing permits, to accommodate approximately 89,000,000 tons of ore and would add 2,250,000 square feet of lined area. This expansion would not be constructed until final design of the facility has been approved by the RWQCB. Following completion of rinsing, formal closure and State of California approvals, approximately 6,000,000 tons of spent leach ore from the Vista Heap Leach Pad would either be relocated to Pad 6, or would be removed and stored in an OISA. Final height of Pad 6 would not exceed 300 feet, and the pad would be constructed in lifts of approximately 30 feet. The new phase of the leach pad would be connected to existing Pad 6 drainage and solution collection system. No additional pond or major piping modifications are required to accommodate the new facility. Permit-mandated levels of pond freeboard and stormwater collection capacity would be maintained. Total new disturbance (already permitted and compensated for) would be approximately 91.6 acres. Section 16 is presently permitted for an expansion of Leach Pad 6 to include the entire section, with a maximum height of 200 feet. However, the proposed height increase to 300 feet is not yet approved.

It is anticipated that liner system construction activities would occur every two to four years for the Proposed Action. As part of the permitted leach pad construction, the site to be constructed would be graded to ensure solution drainage from the leach pad to the solution ponds. In addition, the heap benches and berms would be constructed to provide for 100 percent containment of the precipitation from the one-hour probable maximum precipitation (PMP) design storm event. A service road and containment berm would be constructed around the perimeter of the pad to ensure that process solution and rain, which falls onto the heap, drains to the pregnant solution pond. Interceptor ditches would be constructed to divert upstream surface runoff around the heap leach facilities.

The heap leach pad liner would be designed to serve as an engineered alternative to the prescriptive standard for a Group B mining waste, waste pile, as contained in Title 27, Division 2, Subdivision 1,

Article 7 of the CCR (formerly Title 23, Division 3, Chapter 15, Article 7), and may be approved, or modified, by the Regional Water Quality Control Board (RWQCB) in the Waste Discharge Requirements (WDRs) for the Project. It is anticipated that the liner would be designed to comply with Region 7 RWQCB Order No. 95-016. Liners that have previously been approved by the RWQCB at Mesquite Mine consisted of a PVC geomembrane liner and two layers of compacted, low permeability clay materials, placed on several inches of compacted, fine-grained bedding materials. Third-party construction quality assurance/quality control (QA/QC) would be provided to ensure that lining and bedding materials and containment facilities were constructed in accordance with design specifications approved by the RWQCB. Third-party QA/QC reports would be sent to RWQCB as they are completed.

The existing liners have proven adequate since their first installation in 1984. There has been no detection of cyanide in either the vadose zone or in underlying groundwater, as documented in semiannual reports to the RWQCB.

A containment berm would be constructed around the perimeter of the ore heap. The ore heap would typically be set back from the inside crest of the berm. The leach pad system would be designed such that pregnant solution would drain internally to the central pipe network and into the pregnant solution pond. No exposed solution ditches would be present. A containment berm for the 24-inch solution pipes would be installed along the downhill toe of the leach pad. Containment berms and other higher-sloped areas would be constructed utilizing compacted, fine-grained bedding material.

The first lift of run-of-mine ore would be loaded onto the heap leach pad directly over the protective layer of free-draining gravel. The ore would be loaded onto the pad, without prior crushing, by end-dumping from the haul trucks. Approximately two pounds of lime per ton of ore would be placed onto the trucks prior to dumping. The ore would be spread and scarified by a bulldozer to produce a heap pile with relatively uniform thickness and percolation characteristics.

2.1.4.6 Infrastructure

Extension of the Big Chief Open Pit Mine would require relocation of the existing mine-site operations office, maintenance shop, and ancillary features. These facilities would be disassembled and reconstructed in a previously disturbed area in Section 8, west of the Vista Heap Leach Pad. The specific location is shown in Figure 2.1-1. The existing concrete slab under the offices and shop would be demolished and buried in the OISAs.

Construction of facilities in addition to those listed above would not be required. Existing and approved facilities would be utilized for the proposed expansion operations. Existing ancillary facilities include ore stockpiles, carbon column/electro-winning process area, metallurgical laboratory, change house, explosives magazine, electrical substation, water supply system, fuel storage tanks, lime silos, haul roads, exploration roads and pads, access road, and parking facilities.

A six-foot high chain link fence topped with concertina wire currently surrounds most of the site. Fencing on the north side of the project does not include concertina wire, and is not continuous. In those areas, natural topographic barriers inhibit access to the site. All proposed expansion areas would be fenced where necessary for security and to avoid unauthorized entry.

2.1.4.7 Proposed Disturbance Areas

Table 2.1-3 summarizes the existing and total new mine area disturbance under the Proposed Action for the Mesquite Mine Expansion. The proposed expansion would result in a total allowable disturbance of approximately 5,151 acres. Of this total disturbance, 4,962 acres of disturbance has been previously approved, and a total of 189 acres (see Table 2.1-1), of new disturbance to public lands is proposed under the Plan of Operations. The reallocation of a total of 228 acres of previously approved surface disturbance is also proposed under the Plan of Operations. Table 2.1-3 provides a list of facility categories and the new total allowed disturbance that would result from the Proposed Action.

2.1.5 Water Availability, Sanitation and Utilities

Primary water use at the proposed mine expansion would include the following:

- Dust control
- Soil compaction
- Equipment and facilities maintenance
- Processing (leaching, etc.)
- Sanitation

The Applicant proposes to obtain water from the existing Mesquite Mine Well Field located approximately three miles to the south of the existing site. Initial calculations, based on recent water use records, indicate that the Mesquite Mine water use would not exceed the existing maximum permitted annual well field withdrawal rate of 4,033 acre-feet per year. The Mine used 1,500 acre-feet of water in 1997, but only 1,187 acre-feet in 1999, as measured by the flow meter at the well field.

Sanitation is to be handled by existing Mesquite Mine facilities, utilizing septic tanks. The septic tanks are pumped and maintained periodically to keep the system biologically active and in good working condition. Pumped materials are transported off-site to an appropriate disposal facility. Electricity would be the primary source of power for non-vehicular operations. The primary electrical use would be for pumping of water. Other operations and maintenance facilities would require reduced amounts of electricity.

Table 2.1-3

Proposed Total Allowable Disturbance, Proposed Action

Facility	Cumulative Allowable Disturbance(a)	Existing Disturb-ance	Additional Pro-posed Disturb-ance (Public)	Reallocation Of Disturb-ance Type(b)	Total Allowable Disturbance
Open Pits	968	762	76	+228	1,272
Heap Leach Pads	1,145	903	0	-30	1,115
OISAs	1,690	1,219	52	-74	1,668
Ancill. Facilities	1,159	771	61	-124	1,096
TOTAL	**4,962**	**3,655**	**189**	**0**	**5,151**

Notes: Assumes that OISAs are employed rather than in-pit storage to show maximum possible disturbance. Totals were calculated as if all allowable disturbance occurs. Existing clay storage has been included under existing OISA disturbance.

(a) Allowed under existing approvals (Consolidated POO).

(b) Proposed reallocation of 228 acres that are now approved for disturbance as heap leach pads, OISAs, or ancillary facilities are to be made available for open pit disturbance. No new disturbance is proposed in this column, as may be verified by the zero in the last row. The reallocation is proposed to provide design flexibility in proposed south and southeastern expansion of the Big Chief Pit. These changes accommodate proposed use of 30 acres previously disturbed- by the Vista Heap Leach Pad, and other areas currently permitted for OISA and ancillary facilities disturbance.

Source: Newmont Gold Company, 1999

2.1.6 Proposed Mining Schedule

The Mesquite Mine is a fully-permitted, operating mine. Current ore reserves included in the Mesquite Consolidated POO will be depleted no later than the first half of the year 2001. Construction on the proposed expansion is anticipated to begin in the year 2001, following the approval of the Proposed Action and other required permits. Approval of the proposed expansion during the year 2000 would allow continuous operations, without process interruption, facility closure, or staff reductions. The proposed expansion could extend mine operations for approximately six years (tentatively through the year 2006) or longer depending on economics. Mine reclamation has already begun, and would end in 2011 or when success criteria are met.

Mining rates would vary with time and would begin at approximately 51 million tons of material in year one (2001). The rate would then be increased to approximately 55 million tons in years two to four (2002-2004); and approximately 58 million tons in year five (2005), and 56 million tons the final year of mining operations (year six or 2006). At no time would mining rates exceed the currently permitted 60 million tons per year. Table 2.1-4 indicates the total volumes of materials to be mined, by year, after receipt of the final project approvals.

2.1.7 Reclamation

The Reclamation Plan for the proposed expansion is found in Appendix B of the POO, which was revised as of November 1999. Details of reclamation activities such as recontouring, revegetation and facility demolition are provided in that document. The Mesquite Mine has an approved Reclamation Plan for existing facilities in compliance with the 43 CFR 3809, Surface Mining and Reclamation Act (SMARA) and County Regulations. As the site is located in a remote area and involves some public lands, the reclamation objective is to return the site to open space and wildlife habitat while providing for future mining opportunities that could exist.

Newmont Mining Corporation proposes to conduct reclamation activities for the proposed expansion in accordance with SMARA and the federal regulations found at 43 CFR 3809, the BLM solid minerals reclamation handbook, H-3042-1 and State regulations 14 CCR 3500. The reclamation plan addresses all surface disturbance created by the project. In general, the proposed Reclamation Plan includes measures for protecting wildlife and the public; minimizing erosion and mass failure potential; demolishing structures and neutralizing process components; regrading of selected side and cut-and-fill slopes; revegetation; and, where feasible, providing for the resumption of pre-mining land uses.

Newmont's stated post-mining reclamation goals of the project are to establish conditions that would:

1. Promote the long-term development of a vegetation community typical of the local area;

2. Produce reclaimed areas that are visually and functionally compatible; and

Table 2.1-4

Proposed Mesquite Mine Material Movement Schedule*

Year**	Ore (tons)	Overburden/ Interburden (tons)	Total (tons)
1- (2001)	93,523	51,120,732	51,214,255
2- (2002)	9,538,123	44,820,500	54,358,623
3- (2003)	20,005,942	35,341,384	55,347,326
4- (2004)	11,835,646	43,226,016	55,061,662
5- (2005)	22,162,586	36,009,207	58,171,793
6- (2006)	25,000,000	31,372,564	56,372,564
TOTAL	88,635,820***	241,890,403***	330,526,222***

Notes:
* Includes rehandling of approximately 7,000,000 tons of material from the Vista Pad and existing OISAs.
**Mining may begin earlier depending on approvals.
***Includes mining in areas of existing and already permitted disturbance.

Source: Newmont Gold Company, 1999.

3. Reclaim the area to a stable, functioning landscape unit/ecosystem to allow for similar, but not identical, land uses as currently exist. This would include wildlife habitat and recreation consistent with the applicable reclamation standards of the California Code of Regulations, Article 9, Title 14 (Reclamation Standards), and the surface management regulations under CFR Title 43, Group 3800.

The final landforms cannot be reclaimed to the original contours. The goal of the plan is to create and enhance a self-supporting desert ecosystem that would provide for the post-mine land use of open space for purposes of wildlife habitat, mineral exploration, and recreation. The plan's objectives are as follows:

1. Establishment of stable surfaces and drainage conditions that are compatible with the surrounding landscape;
2. Creation of surface and substrate conditions conducive to plant establishment, where possible;
3. Enhancement of natural reproduction through soil scarification and microcontouring;
4. Management of surface water runoff with microcatchments
5. Use of native plant seeds and materials from local sources within a 10-mile radius of the project site, to ensure site adaptability of the seed; and
6. Blending of the side slopes with the surrounding hillsides in specific areas identified in this plan.

Reclamation demonstration plots comprising 600 acres have been established on Mesquite Mine OISAs. These lands have been recontoured, and more than 500 acres of the test plots have been seeded with native seeds. The plots serve the purposes of training equipment operators in grading methods used for revegetation, in establishing time and equipment use standards for reclamation planning and cost estimation, and for documentation of activities for tracking and reporting progress. Additional details about the test plots are provided in Attachment 1 of the 1999 POO. These demonstration plots, and the studies conducted by the University of Arizona, provide some of the information upon which the proposed Reclamation Plan has been developed.

The reclamation effort consists of different methods to be applied, as appropriate, to reclaim different types of surface disturbance. These methods are the construction and reclamation of diversion channels; demolition of structures and removal of facilities; rinsing and neutralization of residual leach solution in the solution ponds and heap; design and construction of stable slopes; rough regrading; surface preparation through fine grading, ripping to loosen soil, topsoiling and/or construction of water catchments for vegetation; tree and cactus transplantation; reseeding and revegetation with only species indigenous to the area.

The reclamation approach utilizes surface recontouring, combined with seeding of plant species native to this desert region. Proposed final topographic contours are shown in Figure 2.1-2. Plant establishment will occur primarily in conjunction with creation of moisture-enhancement structures (microcatchments) that would serve to collect and concentrate natural precipitation in small basins.

Baseline vegetation conditions for the mine expansion areas are described in Section 3.3 of this EIR/EIS, and in the Vegetation Baseline Survey, Mesquite Mine Project (2000), prepared by Samuel Bamberg and Ingrid Hanne. The latter document is included as Appendix B to this EIR/EIS. Bamberg and Hanne distinguished four categories of shrub/scrub vegetation, covering 90 percent of the study area, and three categories of tree/shrub vegetation (based on the size of the desert wash in which they were found). Perennial shrubs are the dominant vegetation, with trees and a few herbaceous perennials found along the washes. The dominant shrub species, in order of abundance, are *Encelia farinosa* (inciensio), *Ambrosia dumosa* (burrobush), *Larrea tridentata* (creosote bush), and *Opuntia bigelovii* (teddy-bear cholla). The most common tree species were Olneya tesota (desert ironwood) and Cercidium floridum (blue palo verde), found along the washes at relatively low densities.

Perennial plant densities within the proposed mine expansion areas ranged from 0 plants per acre in areas of desert pavement, up to 1,655 plants per acre in areas of shallow washes. The 10 percent of the study area containing tree/shrub vegetation contained an average of 1,055 plants per acre, while shrub/scrub vegetation areas averaged 164 plants per acre (75 percent of the study area). The remaining 15 percent had little or no plant cover, due to disturbance from roads or other soil disruption.

Revegetation would be undertaken for all areas that either have been, or are proposed to be, disturbed by mining activity. This includes all areas that contain diagonal hatching in Figure 2.1-2, plus the areas of proposed mine expansion shown in color on Figure 2.1-1. Because of the physical variance between the different portions of the disturbed area, three revegetation approaches are proposed. One approach would focus on revegetating approximately 5 miles of existing and proposed diversion channels, with an emphasis on reestablishment of microphyll woodland species. A second approach would be used to revegetate existing and proposed OISAs, heap leach pads, and ancillary facilities using upland habitat species. A third approach addresses revegetation of the open pits.

Diversion channels would be designed to pass the storm events which they must accommodate, per applicable law and regulations. Proposed channel designs have been submitted for review by Imperial County, the California Office of Mine Reclamation, and the California Department of Transportation. Where possible, the channel would be constructed with natural-appearing curves, benches and banks (see POO Figure B.13). The proposed bench would not be compacted. Existing diversion structures have volunteer microphyll species plants growing there; the newly designed diversions would offer even better habitat. Surfaces of the banks and benches would be regraded with microcatchment depressions to capture and concentrate available water. Topsoil salvaged from similar habitats within mine expansion areas would be utilized in preparing the benches and lower banks for subsequent seeding using a locally-gathered seed mix. Microphyll species “tubelings” would also be planted along diversion channel benches.

Revegetation of OISAs, heap leach pads, and ancillary facilities/areas would follow minor regrading of portions of the heap leach pads, and rounding of contours at some corners of the OISAs. Microcatchments, essentially grooves or depressions in the area surface, would be formed to capture local precipitation, to enhance plant survival. Such microcatchments would range in length from 5

to 50 feet, and from one to 15 feet wide. This approach has been found to be successful in reclamation of the nearby American Girl Mine. Soil surfaces then would be scarified or ripped to a depth of 15-18 inches in order to capture native seeds to be sown.

Some portions of the open pits have been/would be utilized for O/I storage (see Figure 2.1-2). Such areas would be reclaimed and revegetated as described above. Haul roads and accessible portions of pits not adjacent to pit lakes would also be ripped, and graded into microcatchment areas. These graded areas would then be seeded with the locally-collected seed mix.

Little topsoil exists in the portions of the expansion areas characterized by desert pavement or upland succulent vegetation. These areas have strongly saline subsoils, alkali conditions, and gravelly or rocky textures. They are not suitable as a growth medium or seed source for reclamation. Where there is suitable topsoil, such as in microphyll woodland areas, that topsoil would be collected and used. Areas of suitable topsoil within the proposed expansion areas have been mapped (see Figures 4-5 through 4-7 in the Vegetation Baseline Survey, Appendix B). These areas were estimated to contain approximately 18,000 cubic yards of suitable topsoil. No stockpiling of topsoil is anticipated. Rather, it would be placed as needed as mine development proceeds at, first, the new diversion channels and then, if any is left, OISAs and heap leach pads. If topsoil stockpiles are needed, they would be protected from wind erosion by placing them on the lee side of existing waste rock areas, with signs identifying the material and its planned use to preclude inadvertent use for other purposes.

If plants suitable for transplantation are encountered and must be disturbed during mining activities, they would also be used for revegetation purposes. Such plants are anticipated to include small ironwood and palo verde trees having trunk diameters of 2 inches or less; barrel cactus and chollas of various sizes; small ocotillos, and other shrubs. However, the primary emphasis would be on growth of native plant materials from seed. Transplantation would be done during the late fall or early winter to increase plant survival chances, and would involve healthy plants with healthy root systems. Old growth and unhealthy stems would be pruned, and the plants would be moved within 6 hours to holes dug in microcatchment basins or other depressions. Transplanted plants would be watered twice in three hours, then again in three days. Transplanted trees would be watered periodically for up to two years, but other plants would not require additional watering unless it does not rain for six months.

The area disturbed by mining activity would be revegetated using native or naturalized plant species seeds gathered from within ten miles of the mine. A list of the specific plant species from which seeds would be obtained is found in the POO, Table B-3. Such plants have shown themselves to be able to withstand the harsh conditions present at the mine site.

In the seed collecting programs that have been implemented, seeds have been collected in three ways: 1) directly from the plants; 2) from seed accumulations below shrubs and wind rowed in washes and depressions; and 3) seed banks from salvaged soil. All three methods have been, and would continue to be used to provide seeds for Mesquite Mine revegetation. However, methods two and three have

the advantages of providing large volumes of seeds; seed collection can be done at any time after a productive year, and stored; a wide variety of seeds can be collected; and the litter and soil materials collected with seeds from the ground contain useful nutrients, spores and other soil organisms. See Bamberg responses to comments on EIS Reclamation Plan, 3/31/2000

The seeds would be distributed either by aerial application, or hand broadcast methods (for isolated areas that are less than 10 acres in size). Seed application rates are based on recent experience with 500 acres of on-site demonstration plots (see Attachment 1 of the POO). Seed application rates are expected to range from 2 to 10 pounds of seed per acre, with an average of approximately five pounds per acre.

Seeds would be scattered immediately following scarification of each successive area and creation of microcatchments. This would typically be done in the late spring or early fall, to take advantage of the winter rains. For any fairy duster (*Calliandra*) plants that are destroyed by the proposed mine expansion, replacement plants may be germinated in tubes from collected seed. When ready, they would be transplanted to locations matching their native habitat, along shallow washes within the mine boundaries. It is anticipated that transplantation would be done in early winter, to take advantage of the winter rains.

Fences would be used to preclude grazing or trampling of the new vegetation; however, it is impossible to keep deer and rabbits out. Revegetation at American Girl and Picacho mines, using a similar revegetation approach, has proven successful.

No supplemental irrigation of the seeded areas is proposed. Irrigation was tested in studies conducted by the University of Arizona's Office of Arid Lands Studies (1988-1994), but it was found too detrimental to be used because it facilitated growth of exotic, invasive weedy species.

Dr. Bamberg has monitored composition and densities of all plant species during revegetation testing programs and reclamation implementation at area mines for the last ten years. Based on his experience, and the proposed revegetation approach that uses no supplemental irrigation, no significant problem with invasive, exotic plant species is anticipated. This is because the majority of plants that germinate and grow in the revegetated mine areas are native species adapted to heat, dry climate and low soil moisture. No exotic shrubs or trees are able to grow in this desert without artificial maintenance of moisture conditions. The single exception is tamarisk, which may persist for a short time in ditches along watered roads, or at the base of heap leach pads with high soil moisture. Once the added soil moisture ceases, the tamarisk tree cannot survive the desert conditions. Selective spraying of tamarisk with an approved herbicide such as "Roundup" or "Garlon" would be considered, if necessary, subject to BLM approval. In mine areas that have been reclaimed, no other non-native perennial plants have been recorded. Other exotic species such as red brome, and Mediterranean grass cannot out-compete the native species in areas that are not periodically disturbed. A few mustard species, such as *Malcolmia africana*, were recorded at low densities and at less than one percent cover of the annual flora in mine revegetated areas. Reclaimed

areas that utilize the proposed revegetation approach have been found to be stable and self-sustaining without additional weed control or maintenance after grading and seeding.

The proposed revegetation success criteria are based on achieving a plant establishment that is at least 25 percent of the natural plant density and diversity formerly present in that terrain type. The 25 percent density criterion has been accepted by the BLM in their approval of several recent mine reclamation plans in the vicinity. Appendix B to this EIR/EIS identifies terrain types present in each proposed mine disturbance area, maps their boundaries, calculates their areas, and determines their existing plant densities and diversity. Table B.5 on page B-36 of the POO displays the plant density criteria that would determine revegetation success, for each vegetation subcategory. These densities range from 0 plants per acre for desert pavement, through upland at 55 plants per acre, up to 414 plants per acre for shallow washes. Plant diversity criteria would be based on the vegetation baseline report information.

2.1.8 Compliance Monitoring

The various permits for operation of the proposed mine expansion stipulate numerous monitoring and reporting requirements. A mitigation, monitoring, and reporting program (MMRP) will be developed for the proposed Mesquite Mine Expansion according to the requirements of Public Resources Code 21081.6 and CEQA Guidelines 15097. The MMRP will be prepared concurrently with the Mesquite Mine Expansion Final EIR/EIS and would be docketed for EIR/EIS consideration by the Imperial County Planning Commission, Board of Supervisors and the public. Proposed mitigation measures are listed in this EIR/EIS under each environmental topic, and in the executive summary. Monitoring would be performed by full-time monitoring and engineering personnel who would be employed by the Applicant and would be subject to independent verification by permitting agencies.

BLM would monitor and enforce revegetation efforts for at least five years or until revegetation success criteria have been met. Revegetation efforts would be monitored on an annual basis, and reports would be prepared each year that document how well those efforts are proceeding to meet the identified plant density criteria. Newmont proposes Dr. Samuel Bamberg to conduct the monitoring effort, and to send the resultant annual monitoring reports to the BLM. BLM may either approve the reports and the ongoing revegetation efforts, or, if the then-current revegetation efforts appear inadequate, require alternate or additional measures. This approach has been utilized with proven success at other area mines, including American Girl and Picacho.

No post-closure maintenance or other corrective actions are anticipated to be needed.

2.1.9 End Use

Following completion of Newmont reclamation and revegetation activities, and the meeting of applicable reclamation and revegetation criteria, the area would be returned to use as wildlife habitat. Potential pit lake water quality impacts to wildlife would be minimized through pit design that results in steep pit walls above and below projected pit lake water levels. This would minimize growth of

adjacent vegetation communities, and thus minimize animal dietary intake of possibly harmful elements. Limited recreational use, such as use of the informational trail for viewing the mine site would continue. BLM would decide at a future date if any perimeter fences should be retained for protection of public health and safety. During reclamation work by Newmont, berms would be constructed around all of the mine pits, and pit access roads would be made inaccessible to vehicles for protection of public safety.

2.2 ALTERNATIVES

2.2.1 Introduction

CEQA requires an EIR to "describe a range of alternatives to the Proposed Action or to its location, that can feasibly obtain the project's basic objectives. . ." (CEQA Guidelines, § 15126(a), Pub. Res. Code Section 21100(s)). The key to alternative analysis under CEQA is to describe a range of reasonable alternatives to the project, or to the location of the project, which would reasonably attain the basic objectives of the project, and evaluate the comparative merits of the alternatives (State CEQA Guidelines, § 15126.6(a)); and, to focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly (State CEQA Guidelines, § 15126.6(b)).

NEPA also requires that an EIS contain an analysis of alternatives to the Proposed Action (42 U.S.C. § 4332(C)(iii)). The BLM's National Environmental Policy Act Handbook (October 25, 1988, herein, "BLM Handbook") requires that the EIS "[d]escribe the no-action alternative and all reasonable alternatives, including related monitoring requirements, to the same level of detail as the proposed action." The same Handbook section requires that the EIS address "how each alternative, with the exception of the no-action alternative, would generally accomplish the purpose and need for the action..." (BLM Handbook Chapter 5, Sec. (c)(3)(f)(3)). The BLM Handbook also requires that the EIS identify "alternatives considered but eliminated from detailed analysis." (Sec. (c)(3) (f)(3)).

The methodology for analysis of alternatives in this EIR/EIS has taken into consideration the mandates and guidance from the above-referenced sources. Section 2.2.3 describes the No Action Alternative. Section 2.4 presents a broad range of additional potential geographic, design, and technology alternatives that have been considered but eliminated from further detailed analysis. The reasons for eliminating these potential alternatives are that they do not meet a majority of the project objectives as set forth in Section 1.1.4, and in some cases because they would be anticipated to cause a substantially greater impact to the environment than the Proposed Action.

2.2.2 Reduced Footprint Alternative

The Lead Agencies examined this alternative because reducing the amount of additional surface disturbance at the site would reduce environmental effects related to that surface disturbance. The

Reduced Footprint Alternative would create a smaller area of total surface disturbance within the boundaries of the mine. The Big Chief West Overburden/Interburden Storage Area would not be developed under this alternative. In addition, the size of the East Rainbow North and South OISAs would be reduced from those under the Proposed Action within the mine.

The configuration of this alternative is depicted in Figure 2.2-1. The total allowable disturbance for the Reduced Footprint Alternative is presented in Table 2.2-1. Disturbed acreage by specific facility is shown in Table 2.1-1, in the discussion of the Proposed Action. The additional area of surface disturbance requiring permits within public lands would be 142 acres, 47 acres less than the 189 additional acres of public lands that would be disturbed under the Proposed Action. The total area of permitted surface disturbance within the Reduced Footprint Alternative would be 5,104 acres, 47 acres less than the 5,151 acres that would be disturbed under the Proposed Action and prior permitted development.

Mining and processing rates for the Reduced Footprint Alternative would be the same as those for the Proposed Action, and initial capital costs, and ongoing capital and operating costs, would also be similar. The Reduced Footprint Alternative assumes the implementation of all of the environmental protection measures incorporated into the Proposed Action. Also, this Alternative assumes that following the completion of mining, all of the same reclamation methods which are to be applied for the Proposed Action would be undertaken and completed for the Alternative.

Impacts to cultural resources on federal lands managed by BLM would be avoided with this alternative.

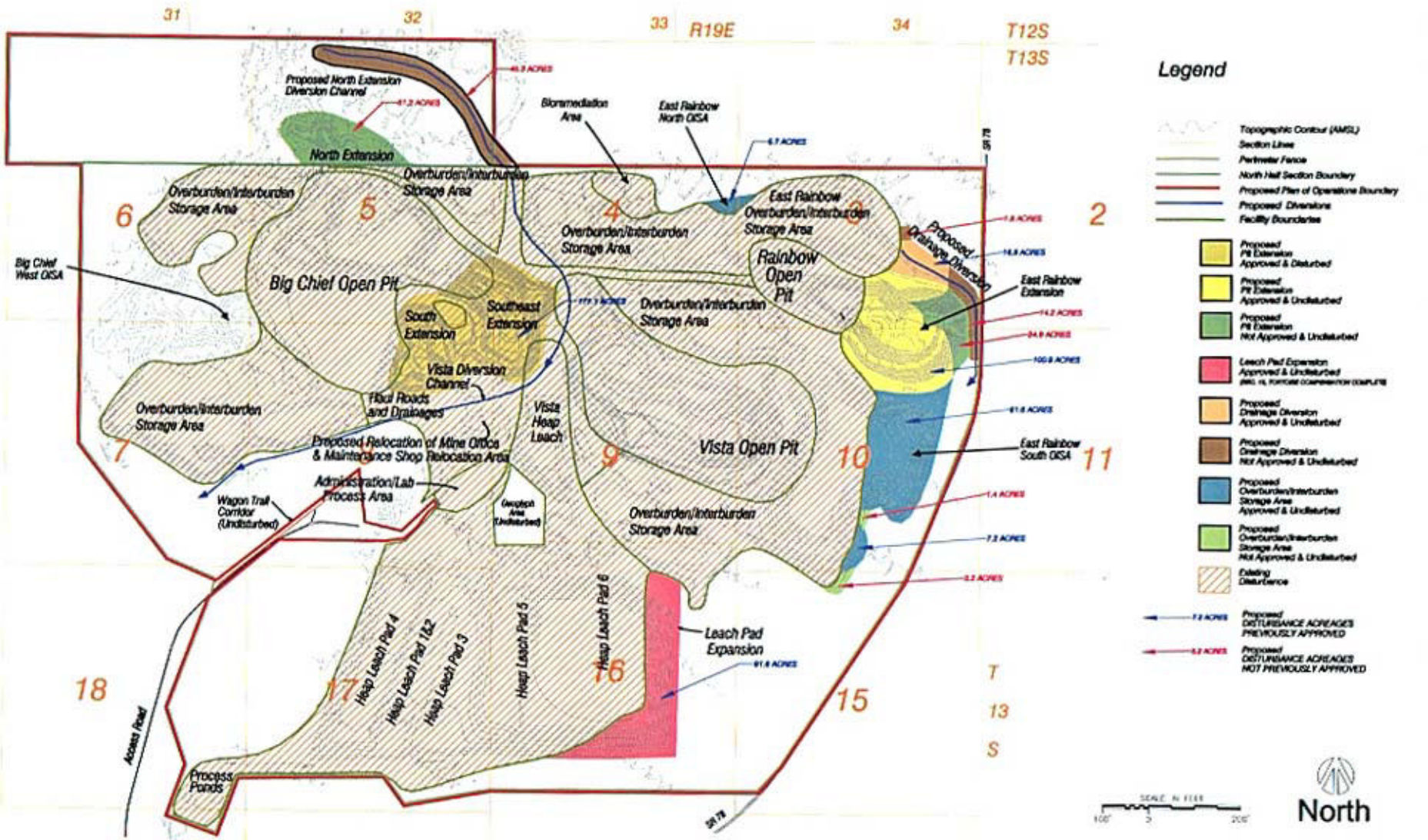
2.2.3 BLM's Preferred Alternative

Chapter V, Section B.2.b. of the BLM NEPA Handbook directs that "[T]he manager responsible for preparing the EIS should select the BLM's preferred alternative. …For externally initiated proposals, …the BLM selects its preferred alternative unless another law prohibits such an expression. …The selection of the preferred alternative should be based on the environmental analysis as well as consideration of other factors which influence the decision or are required under another statutory authority."

Thus, the BLM Preferred Alternative is the alternative that best fulfills the agency's statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors. BLM has determined that the Reduced Footprint Alternative is the BLM's Preferred Alternative.

2.2.4 No Project Alternative

CEQA requires the No Project Alternative discussion to include the existing conditions at the time the NOP is published as well as what would reasonably be expected to occur in the foreseeable future if the Proposed Action were not approved based on current plans and consistent with available



SOURCE: Newmont Mining Corporation, 1999

7/7/00

Mesquite Mine Expansion EIR/EIS

Reduced Footprint Alternative

FIGURE 2.2-1

Table 2.2-1

Reduced Footprint Alternative, Proposed Total Allowable Disturbance

Facility	Cumulative Allowable Disturbance (a)	Existing Disturb.	Additional Proposed Disturbance (Public)	Reallocation Of Disturb. Type (b)	Total Allowable Disturbance
Open Pits	968	762	76	+228	1,272
Heap Leach Pads	1,145	903	0	-30	1,115
OISAs	1,690	1,219	5	-74	1,621
Ancill. Facilities	1,159	771	61	-124	1,096
TOTAL	**4,962**	**3,655**	**142**	**0**	**5,104**

Notes: Disturb. = Disturbance

Totals calculated as if all allowable disturbance occurs; existing clay storage is included under existing OISAs.

(a) Allowed under existing approvals (Consolidated POO).

(b) Proposed reallocation of 228 acres now approved for disturbance as heap leach pads, OISAs, or ancillary facilities, to be made available for open pit disturbance. No new disturbance is proposed in this column. The reallocation is proposed to provide design flexibility in proposed south and southeastern expansion of the Big Chief Pit. These changes accommodate use of 30 acres previously disturbed by the Vista Heap Leach Pad, and other areas permitted for OISA and ancillary facilities disturbance.

Source: Newmont Gold Company, 1999

infrastructure. Under the No Project Alternative, the proposed Mesquite Mine Expansion would not be approved for development. The permits listed in Table 1.7-1 that would authorize the expansion of the mine would not be approved. Previously permitted development would continue to occur but would be limited to the minimum of economically-reasonable ore given recent gold prices. The No Project Alternative addressed in this EIR/EIS is not the maximum mine development that could occur under existing permits and higher gold prices. The following permitted disturbances would occur under the No Project Alternative (Figure 2.2-1):

1. Continuation of mining in Vista and Big Chief pits
2. Increases in the heights of existing OISAs to permitted levels.
3. Continued leaching of gold from the ore in the permitted heap leach pads.

Differences between the No Project Alternative and the Proposed Action are shown in Table 2.2-2.

2.2.4.1 Site Plan and Major Components

The No Project Alternative would result in completion of mining by mid-2001. The resulting site plan would be very similar to the map of existing facilities, Figure 1.3-2.

Continued Heap Leach Pad Use (Permitted)

The ore removed from the open pits would continue to have very low concentrations of gold and other precious metals. The heap leach facility would continue to be used to recover the precious metals from the ore-bearing rock. Ore-bearing rock would be hauled to the heap leach pad where it would be stacked to heights up to 200 feet under existing permits, as compared to 300 feet for the Proposed Action.

Proposed Overburden/Interburden Storage Area (Permitted & Undisturbed)

Under the No Project Alternative, OISAs are anticipated to extend approximately 40 to 300 feet above the surrounding terrain, with average angle of repose slopes ranging from 33-38 degrees.

2.2.4.2 Reclamation Plan

Under the No Action Alternative, mine reclamation would occur in accordance with the existing reclamation plans.

2.3 SUMMARY OF ENVIRONMENTAL IMPACTS

The environmental impacts of the Proposed Action, the Reduced Footprint Alternative and the No Project Alternative are summarized in Table 2.3-1.

Table 2.2-2

Comparison of Key Project Characteristics of the No Project Alternative To Those of the Proposed Action

	No Project	Proposed Action
Project Area	4,962 acres	5,151 acres[2]
Disturbance Area	3,655 acres	5,151 acres
Excavated Material[1]	104 million tons	330 million tons
Out-of Pit Storage Area Volume	81 million tons	242 million tons[3]

Notes: [1] includes ore, interburden and overburden
[2] incorporates conversion of permits for areas of OISA, heap leach pad and ancillary facilities disturbance to open pit disturbance.
[3] Includes material from both permitted and unpermitted mine pits.

Source: Newmont Gold Company, 1999

Table 2.3-1

Summary of Environmental Impacts

Issue Topic	Proposed Action	Reduced Footprint Alternative	No Project Alternative
Geology, Soils and Mineral Resources	With implementation of the proposed design, and with compliance to laws and regulations, impacts to geology, soils and minerals would be less than significant.	With implementation of the proposed design, and with compliance to laws and regulations, impacts to geology, soils and minerals would be less than significant.	Impacts to resources would be less than significant. However, this alternative would not achieve a key applicant objective, that of recovering as much precious metal as possible from the mine site.
Water Resources	With implementation of the proposed design, and with compliance to laws and regulations, water impacts would be less than significant.	With implementation of the proposed design, and with compliance to laws and regulations, water impacts would be less than significant.	This alternative would use 9,000 fewer acre-ft of ground-water than the other alternatives. It would also avoid impacts to ACOE jurisdictional waters and CDFG streambeds.
Biological Resources	This alternative would result in impacts to 321 acres of creosote / desert pavement habitat, 58 acres of microphyll woodland, and 45 acres of upland habitat. It would cause direct impacts to desert tortoise and fairy duster. It would result in impacts to 22.5 acres of ACOE jurisdic-tional waters and CDFG streambeds. However, with implementation of listed miti-gation measures for desert tor-toise and fairy duster, revegeta-tion of drainage diversions and areas disturbed by mining, and deeding more than 1,383 acres of compensation lands to BLM, the identified impacts would be reduced to less than significant.	This alternative would reduce biological impacts of the Proposed Action. However, this alternative would result in impacts to 276 acres of creosote / desert pavement habitat, 57 acres of microphyll woodland, and 34 acres of upland habitat. It would cause direct impacts to desert tortoise and fairy duster. It would result in impacts to 19.5 acres of ACOE jurisdic-tional waters and CDFG streambeds. However, with implementa-tion of listed mitigation measures for desert tortoise and fairy duster, revegetation of drainage diversions and areas disturbed by mining, and deeding more than 1,211 acres of compensation lands to BLM, the identified impacts would be reduced to less than significant.	This alternative would avoid the Proposed Action's impacts to 321 acres of creosote / desert pavement habitat, 58 acres of microphyll woodland, and 45 acres of upland habitat. It would avoid direct impacts to desert tortoise and fairy duster. It would avoid impacts to ACOE jurisdictional waters and CDFG streambeds. However, it would forego the opportunity to preserve in perpetuity 1,200 – 1,400 acres of good desert tortoise habitat through the compensation process.
Cultural Resources	Impacts would be less than significant.	Impacts would be less than significant.	Impacts would be less than significant.
Paleontological Resources	No paleontological resources exist at the site; no significant impacts would occur.	No paleontological resources exist at the site; no significant impacts would occur.	No paleontological resour-ces exist at the site; no sig-nificant impacts would occur.
Transportation	Impacts would be less than significant.	Impacts would be less than significant.	Impacts would be less than significant.

Table 2.3-1

Summary of Environmental Impacts

Issue Topic	Proposed Action	Reduced Footprint Alternative	No Project Alternative
Noise	With continued compliance with existing County and federal noise regulations, no significant impacts would occur.	With continued compliance with existing County and federal noise regulations, no significant impacts would occur.	With continued compliance with existing County and federal noise regulations, no significant impacts would occur.
Air Quality	With implementation of PM_{10} dust control measures listed in the EIR/EIS, there would be no significant impact.	With implementation of PM_{10} dust control measures listed in the EIR/EIS, there would be no significant impact to air quality.	With implementation of PM_{10} dust control measures listed in the EIR/EIS, there would be no significant impact.
Land Use	Impacts would be less than significant.	Impacts would be less than significant.	Impacts would be less than significant.
Recreational Resources	Impacts would be less than significant.	Impacts would be less than significant.	Impacts would be less than significant.
Visual Resources	Low to moderate degrees of visual change would occur, consistent with VRM Class III visual guidelines. Therefore, visual impacts would not be significant.	Low to moderate degrees of visual change would occur, consistent with VRM Class III visual guidelines. Therefore, visual impacts would not be significant.	A low degree of visual change would occur, consistent with VRM Class III visual guidelines. Therefore, visual impacts would not be significant.
Environmental Health and Public Safety	Based on compliance with regulatory requirements, and operating practices used at the Mine since 1984, no significant impacts would occur.	Based on compliance with regulatory requirements, and operating practices used at the Mine since 1984, no significant impacts would occur.	Based on compliance with regulatory requirements, and operating practices used at the Mine since 1984, no significant impacts would occur.
Socioeconomics	Impacts would be less than significant.	Impacts would be less than significant.	Adverse impacts would occur to the area due to loss of jobs, income, government revenues.
Public Services and Utilities	With mitigation measures as listed in the EIR/EIS, impacts would not be significant.	With mitigation measures as listed in the EIR/EIS, impacts would not be significant.	Impacts would be less than significant.

Source: BRG Consulting, Inc., 2000

2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

Consistent with the CEQA/META Guidelines discussed in Section 2.2, alternatives to be considered in this EIR/EIS are limited to those that would avoid or substantially lessen any of the significant effects of the project and could feasibly attain most of the basic objectives of the project. Accordingly, all of the developed potential alternatives (except those that are described in Section 2.2) are discussed and evaluated below; first for their ability to avoid or substantially lessen any one or more of the significant environmental effects of the Proposed Action and second, regarding feasibility. The rationale for considering but not selecting these alternatives for further analysis is also provided.

2.4.1 Reduced Mining Alternatives

The location of each of the three pits (Big Chief, Rainbow, and Vista Open Pit) is strictly dictated by the location of the identified ore; there are no locational alternatives for any of the pits. The design for each of the pits was dictated principally by the distribution of identified ore, as constrained by the structural stability of the rock that forms the pit walls and by the ability to economically mine, haul and process the ore. Alternative pit designs could be developed, although none (short of eliminating the pit entirely) would avoid or substantially lessen any of the significant environmental effects of the Proposed Action, and any alternative pit design would reduce conformance with the basic objectives of the Project (to profitably recover as much of the precious metals within the mine as possible, in conformance with the 1872 Mining Act).

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2.4.1.1 No Big Chief Pit Extension

The Lead Agencies examined this alternative because reducing the amount of mining at the site would reduce environmental effects related to surface disturbance and other mining activities. The Big Chief Pit Extension and drainage improvements located in the two north half sections owned by SLC would not occur under this alternative. All of the proposed improvements associated with the East Rainbow Pit Extension would occur.

Impacts to biological resources, waters of the United States, and cultural resources on State lands would be avoided with this alternative. This alternative is infeasible because it would reduce conformance with the basic objectives of the Project (to profitably recover as much of the precious metals within the mine as possible, in conformance with the 1872 Mining Act). It would be economically infeasible to proceed with just a portion of the proposed expansion because initial capital expenditure would not include a full return in Newmont's investment required for mining processes (i.e., substantial new equipment, labor) if there was no Big Chief Pit extension. For these reasons, this alternative was rejected.

2.4.1.2 No East Rainbow Pit Extension

The Lead Agencies examined this alternative because reducing the amount of mining at the site would reduce environmental effects related to surface disturbance and other mining activities. The unpermitted East Rainbow Pit Extension, drainage improvements, and OISA located in sections 3, 4, 10 and 15 would not occur under this alternative. All of the proposed improvements associated with the Big Chief Pit Extension would occur.

The primary environmental benefit of this alternative would be reduced impacts to biological resources, waters of the United States, cultural resources, and visual resources. This alternative is infeasible because it would reduce conformance with the basic objectives of the Project (to profitably recover as much of the precious metals within the mine as possible, in conformance with the 1872 Mining Act). It would be economically infeasible to proceed with just a portion of the proposed expansion because initial capital expenditure would not include a full return in Newmont's investment required for mining processes (i.e., substantial new equipment, labor) if there is no East Rainbow Pit extension. For these reasons, this alternative was rejected.

2.4.2 Alternative Operations

2.4.2.1 In-Pit Overburden/Interburden Storage Area (IOISA) Alternative

Both the Proposed Action and the Reduced Footprint Alternative would store some of the waste rock removed from the mine pits back into areas of the pits that have little or no remaining gold ore. Approximately 12.6 million tons of waste rock would be backfilled into the existing pits under the Proposed Action, while 91.6 million tons would be backfilled under the Reduced Footprint Alternative.

Newmont's initial submittal to Imperial County and BLM included information on a IOISA alternative. This alternative would store all new overburden/interburden from project expansion in the existing pits. Under this alternative, no waste dumps (OISAs) would be expanded, avoiding surface impacts to 175.3 acres. Of that area, 123.4 acres have been approved for disturbance by BLM in prior Plans of Operation, but no compensation has yet been made for that area for disturbance to desert tortoise habitat. The other 51.9 acres has no permits, is undisturbed, and no compensation for disturbance has been provided. Implementation of this alternative would result in less surface disturbance, but would result in the burial and potential loss of mineral resources that are not economical with current technology and gold prices in the vicinity of $300 per ounce. It would also result in additional mine pit lake water quality impacts, as described in Baker Consultants, Inc., 1999. This would have adverse impacts to wildlife, as discussed in the ecological risk assessment.

The proposed extensions of the Big Chief and East Rainbow pits would be the same as for the Proposed Action. Drainage facilities also would be substantially the same as for the Proposed Action (Figure 2.1-1) and would integrate with the existing Mesquite Mine drainage structures.

Mining operations for an IOISA Alternative would be very similar to that of the Proposed Action, except that interburden and overburden material resulting from mining expansion would be stored entirely in existing mining pits, instead of above-ground storage areas. Other design aspects of an IOISA Alternative, such as the heap leach pad, liners, and storage pond, would be essentially the same as those identified for the Proposed Action.

An IOISA alternative, in which all the new pit expansion waste rock is placed back in the mine pits, is considered infeasible for three reasons:

1. It would cover gold-bearing ore that is not now economically recoverable at $300 per ounce, but which could be in the future, if there are changes in mining technology or increases in the price of gold, or both. Covering that ore with waste rock would increase the future cost of recovering the gold, and thus make future recovery less feasible.

2. It would substantially increase the costs of material handling over that of the Proposed Action or Reduced Footprint Alternative, adversely affecting the economic viability of the project.

3. It would adversely affect pit lake water quality, with associated impacts to wildlife.

2.4.2.2 Steeper Pit Walls/OISA Slopes

Steeper pit walls and OISA slopes would reduce the area of surface disturbance associated with the Proposed Action; however, such structures would not be stable, considering the seismic risk and materials at the project site. Over the long-term, steeper walls and slopes would be expected to fail with resulting surface impacts to surrounding areas. Approval of steeper pit walls and OISA slopes would result in short-term reduction in the surface disturbance identified for the Proposed Action; however, over the long-term, impacts would be expected to be similar to those identified for the Proposed Action. Steeper OISA slopes would appear less natural, and would result in less natural-looking features. Because the reduction in surface disturbance would only be short-term, this alternative was rejected as infeasible.

2.4.3 Alternative Mine Location

One suggested alternative was to construct and operate a mine at an entirely different location than the Project Area. CEQA Section 15126.6(f)(2) states that only alternative locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in an EIR. It goes on to state that if no feasible alternative locations exist, the EIR must disclose the reasons for this conclusion. Such an alternative would clearly eliminate all of the residual significant adverse effects of the Proposed Action, although the significant adverse environmental effects of any such alternative project may be greater or less than those of the Proposed Action. In

the absence of an actual location to consider, any attempt to evaluate the environmental impacts of this suggested alternative would be speculative and not add substantially to the environmental analysis presented in this EIR/EIS. Such an alternative would also clearly fail to meet any of the basic objectives of the Proposed Action (to profitably recover as much of the precious metals within the mining claim as possible, in conformance with the 1872 Mining Act). The Applicant has patented mining rights to the minerals located on-site; and there is no feasible alternative site that would allow the Applicant to exercise these rights. In addition, Section 15126.6(f)(2)(B) of CEQA Guidelines states that alternative site evaluations may not be appropriate for mining projects, that "…in some cases there may be no feasible alternative locations for a geothermal plant or mining project which must be in close proximity to natural resources at a given location." Therefore, an alternative site location was eliminated from detailed consideration.

While the Guidelines for the Clean Water Act Section 404(b)(1) require consideration of alternative locations for projects involving fill to Waters of the United States, it is not clear at this time that development of known mineral reserves fall under this provision. BLM, in a letter dated November, 1999, determined that the Section 404 process for the project should proceed concurrently with the EIR/EIS, but on a separate "track." All 404 issues regarding the project would be worked out with the U.S. Army Corps of Engineers, with the participation of EPA personnel, prior to any impacts to Waters of the United States.

2.4.4 Alternative Mining Technologies

The existing Mesquite Mine is permitted as an open pit mine encompassing approximately 4,962 acres. Evaluation of options for the selection of mining techniques and ore processing technologies is generally performed during the pre-feasibility state of mine development. In the case of precious metal mines, this decision is largely based on many factors including the following:

- Ore grade
- Geologic controls on ore zones
- Bulk of mineralization to be mined
- Mineralogy
- Extractive metallurgy
- Process efficiency

Low-grade deposits such as those discovered at the Mesquite Mine, typically do not provide the return on investment necessary to justify capital-intensive mining techniques such as underground mining or capital-intensive milling. These types of deposits are generally mined via the open-pit method and processed via the cyanide heap leach method. In-situ leaching, where the cyanide solution is passed though the mineralization as it lies underground and collected through wells is not considered environmentally acceptable by the applicant and is not discussed further.

The Mesquite Mine has operated as an open pit, cyanide heap leach mine since operations commenced in 1985. The proposed 693-acre expansion would occur in the same geologic

formations and structures as those encountered to date. Capital expenditures for the leach facility have already been made and plans for a leach pad expansion have already been approved by the County, state, and federal agencies. Given the current and foreseeable economic conditions, development of the ore body by underground methods and processing of the orebody via any other method are not economically feasible.

2.4.5 Clean Water Act Section 404(B)(1) Alternatives

The applicant, Newmont Gold Company, a subsidiary of Newmont Mining Corporation, may need a permit from the Army Corps of Engineers, Los Angeles District (ACOE) to discharge dredged and fill material into waters of the United States. Anticipated impacts to Waters of the United States from both feasible alternatives are discussed in Sections 4.1.2 and 4.2.2 of this EIR/EIS. Implementation of mine developments that excluded one or more proposed facilities and thus might reduce impacts to waters were reviewed but were rejected as economically infeasible. This is because these alternatives would not provide a full return on Newmont's investments in equipment and labor. A mine plan that would store all new waste rock in the existing pits was also reviewed, but was rejected because 1) it would cover, and thus make more expensive to access, known lower quality gold ores remaining in the pits; 2) it would cost substantially more to move the waste rock and place it in the pits; and 3) it would result in lower pit lake water quality.

The discharge permit would be issued under ACOE permitting authority pursuant to Section 404 of the federal Clean Water Act. The ACOE would evaluate the application and reach a decision based on federal regulations (33 CFR Parts 320 to 330; 40 CFR Part 230) for implementing Section 404 and on related guidance. The ACOE must complete two independent analyses as part of the decision-making process: a public interest review, and an analysis for consistency with the guidelines for specifications of disposal sites for dredged and fill material, commonly referred to as the 404(b)(1) guidelines. This analysis would be prepared jointly with the ACOE, USEPA, and Newmont participating. The 404 process will proceed concurrently with the EIR/EIS process. BLM ruled in November 1999 that the 404 process discussions should be conducted separately, but in parallel with the EIR/EIS process, in order to avoid potential delays. Public review opportunity would be afforded through the 404 Standard Individual Permit process.